



Hydstra to merge with Kisters

Ian Donoghue, General Manager

I am pleased to announce that Hydro Tasmania and Kisters AG of Germany have agreed to merge the Hydstra group of companies and the Kister's Resource Management System Division, with effect from 1st January 2004.

Whilst Kisters AG (www.kisters.de) have a strong base in Europe and Hydstra has a strong base in the southern hemisphere, neither has so far established the global footprint required to fully grow their product and business and provide clients with the benefits derived from worldwide usage. This merger delivers this global footprint and provides a solid foundation to deliver better products to clients.

The Hydstra business will continue to operate as Hydstra Pty Ltd in the southern hemisphere and other key markets. All staff have been offered roles in the merged organisation and while most have accepted Damian Skinner and Tom Riley from the Client Services team in Canberra together with Stuart Allie and Bruce Young from the Product Development team in Hobart have taken this opportunity for a career change. I would like to take this opportunity to acknowledge their contribution to Hydstra and wish them well in their new endeavours.

Given the short timeframe within which this merger has been completed, a substantial amount of detail is still to be finalised. A information pack outlining full details of the merged entity and the future product strategy will be provided to clients early in the new year. Client visits and seminars/workshops will also be held early in 2004 to provide clients with the opportunity to meet the management team of the merged entity.

In closing, on behalf of the management and staff of Hydstra, I would like to wish all clients and their families seasons greetings and a happy and prosperous 2004.

Product Workshop in Sydney, February 2004

Hydstra will be conducting a seminar and workshop in Sydney in late February, to showcase the additional functionality that will be available to Hydstra clients from the Kisters product range, including the Kisters web module, Lite product and SODA, an integrated hardware and software telemetry solution. Klaus Kisters will be attending the seminar to meet with clients and outline the product strategy for the merged entity.

If you are interested, please contact Debbie Cockburn at hydstra@hydstra.com, or by phone on +61 2 6288 2302. Further details will be provided by e-mail and the Hydstra web site closer to the date.

Special points of interest:

- Hydstra to merge with Kisters
- Product Workshop in Sydney, February 2004
- Hydstra User Group 2003
- Hydstra in Vietnam
- New Site Lists in Hydstra/TS
- Using Parameter Conversions in Hydstra/TSM

Hydstra User Group Meetings 2003

By Damian Skinner, Client Services

During August and September Hydstra once again presented User Group meetings in Australia, New Zealand and the USA and for the first time the "HUG" world tour included a meeting in South Africa. It is encouraging for all Hydstra users to see that the meetings have continued to grow since they were established in 1990.

In keeping with the trend of recent years, the meetings had a strong focus on presentations from clients on how the software is being applied in the real world, as well as some presentations from Hydstra staff on where the products and the company are heading in the future. The diversity of papers presented at the meetings reflects the breadth of the Hydstra user community:

- Automated Faxes and Emails—Christopher Frick, WA Department of Environment
- Dam Safety Monitoring using Hydstra/Modelling and Hydstra/TSM—Crispin Smythe, Hydro Tasmania
- Development of a New Flood Forecasting Modelling Platform—Kevin Shook, Alberta Environment
- From Distributed to Centralised, a Journey through the Data of DIPNR—Alex Springall, Department of Infrastructure, Planning & Natural Resources
- Hydrology Characteristics of a Seasonal Stream—Dene Moliere, Environmental Research Institute of the Supervising Scientist
- Hydromet data management at BC Hydro using Hydstra—Stephanie Smith, BC Hydro
- Hydstra and the Mining Industry—Steve Orr, Ecowise Data Services
- Hydstra Modelling in Vietnam—Holly Taylor, Hydro Tasmania
- Lake Fenton Catchment Modelling—Bryce Graham, Hydro Tasmania
- The Paperless Office Myth, How SydneyWater Handles Documentation Related to Sites—Todd Lovell, Sydney Water
- Statewater NSW River Operations System—Tony Caine, Statewater NSW

Thanks to everybody who attended the meetings, particularly those who presented a paper. The large number of clients who attended the meetings along with the high standard of presentations confirm the strength of the Hydstra user community.

The schedule for next year's Hydstra User Group tour has not yet been finalised, although the Australia and New Zealand Hydstra User Group meetings will once again be held in conjunction with the Australasian Hydrographer's Association Biannual Conference at the Gold Coast on July 26-28, 2004. Start planning those papers now!

The Hydstra User Group has continued to grow since it was established in 1990.

Hydstra Offices Closed over Christmas

Hydstra will be closing their offices in Canberra, Hobart and San Diego from Monday, December 29, reopening on Monday, January 5, 2004. All support e-mail will be monitored for urgent requests during this week, and you can contact Tom Riley in an emergency, on 0409 390 868 (+61 409 390 868 from outside Australia).

Hydstra in Vietnam

By Damian Skinner, Client Services

Damian Skinner, Paul Sheahan and Will Alderton recently visited Hanoi in Vietnam to install Hydstra/TS at the Hydro Meteorological Service (HMS) as a part of the Vietnam—Australia Water Resources Management Assistance Project. One of the aims of the project is to develop a National Water Resources Database, which means that it is likely that Hydstra will also be deployed in a number of other government agencies throughout Vietnam.

The Hydro-Meteorological Service in Vietnam receives large volumes of manually recorded time-series data, which has previously been managed using a variety of in-house and commercial software packages. Hydstra/TS provided HMS with a centralised archive that combined all the various types of data being collected.

Hydstra/TS will play a vital role in HMS's data capture project, where historical paper records are being transferred into an electronic format so that the data can be preserved. With the large amount data being entered into the system, it was essential to establish streamlined data entry procedures. This will involve the use of Hydstra's chart digitising package, HYDIGI, to convert historical charts, as well as some custom-built applications for manually entering data.

Hydstra/TS provided HMS with a centralised archive that combined the various types of data being collected by the organisation.



Will Alderton, Damian Skinner and Paul Sheahan with Ms Thuy, Ms Hang and Mr Cau from HMS



Ms Thuy from HMS shows Ray Boyton manually recorded hydrological records

Positions Vacant

There are two positions vacant in the Client Services Team in Hydstra's Canberra office. Please direct all enquiries to Bill Steen at steenw@hydstra.com, or by phone on +61 2 6288 2756. Applications close on January 15, 2004.

Sales & Marketing Consultant

Hydstra is looking for a Sales and Marketing Consultant to pro-actively develop the sales and marketing activities of Hydstra to meet current business performance objectives.

The key focus of the role will be the sales and marketing of software and associated consulting services to new clients internationally and within Australia.

Based in our Canberra office the Sales and Marketing Officer will participate in a number of key activities including the preparation and implementation of plans to market the Group's products, assist in the preparation and delivery of sales and marketing presentations, assist in the management of all bidding and tendering processes, and assists with the recruitment and selection of Agents.

The successful applicant will, ideally, be qualified in a hydrological technical discipline, experienced in marketing of software or services to public utilities, have demonstrated skills in developing sales and marketing plans and budgets and have excellent computer literacy, particularly in Microsoft Office and time series software such as the Hydstra suite of products.

Excellent communication and interpersonal skills are mandatory.

Remuneration will be determined by qualifications and experience.

Client Services Consultant

Hydstra currently has a vacancy in the Client Services group in Canberra. We are looking for someone with time series database management experience. The position will be based in Canberra with the client services group.

Duties will involve:

- Routine client support and help desk duties,
- National / international installation and training activities.
- System customisation.

Installation teams are assembled to obtain the necessary skill mix. We do not expect applicants to have all skills on appointment, training will be provided where required.

The skill areas that we are looking for include:

- Existing capacity or interest in developing computer programming skills.
 - Detailed knowledge of HYDSTRA times series management product(s).
 - Ability to train in the use and application of HYDSTRA products.
 - Good knowledge of field and office hydrological/environmental monitoring practices.
 - An interest in national / international marketing activities
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New Syntax for Site Lists in Hydstra/TS

By Damian Skinner, Client Services Consultant

Site Lists, also sometimes called Station Lists, Site Specifiers or HYSTNS Expressions, have always provided users with a powerful way of producing results for a range of sites in a single operation. The original syntax for Site Lists was based on the 'swearing' set of characters, such as !@#\$%^;, which are unintuitive and difficult to remember. This syntax is not only difficult to use, but there are also problems passing them through the command processors in different operating systems. This impacts on how Site Lists can be used in batch jobs, perl scripts and INI files.

To resolve these problems there is a new syntax for specifying a list of sites in Hydstra/TS v9.0, which is based on the concept of functions. This new syntax should be familiar to anybody who has used a programming language, and are much easier to learn than the original syntax. The only downside to the new syntax is that the expressions become much longer, but this is a worthwhile trade-off for the increased readability.

There will be a transition period where the old Site List syntax will still be accepted, but a warning message will be displayed to prompt you to upgrade to the new syntax. This will give you a couple of years to update your supporting processes (batch jobs etc) to use the new syntax.

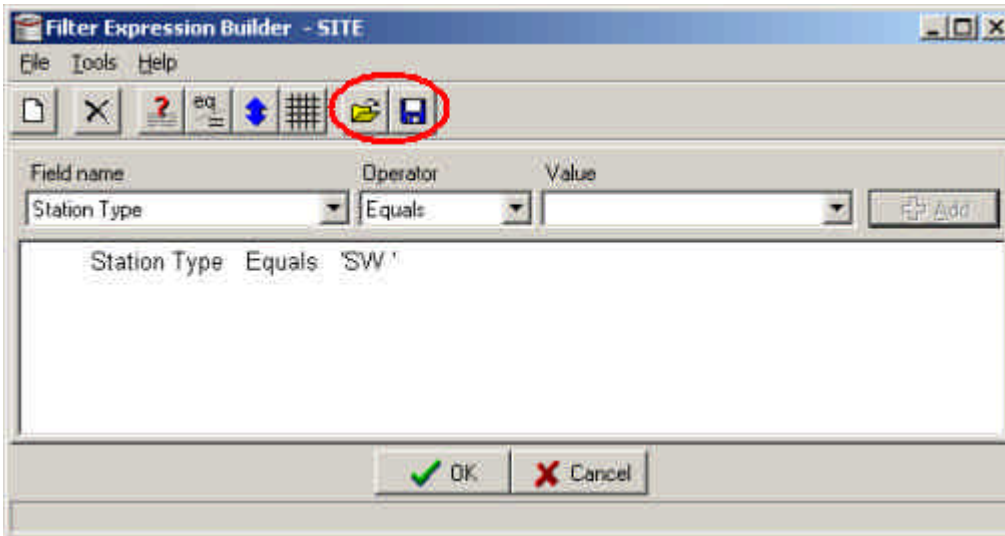
Function	Description	Original Syntax
CONFIG (HyconfigVariable) e.g. CONFIG(HYDPATH)	Returns a keyword from HYCONFIG.INI	&HYDPATH
DIR (FolderName) e.g. DIR(CONFIG(HYDPATH)*.A)	Returns a list of files in a folder	\$&HYDPATH.*.A
TABLE (TableName) e.g. TABLE(SITE) TABLE([PUB.EXPORT]SITE)	Returns the STATION field from a range of records in a Hydstra table. This can also be used on tables in work areas.	#site
TABLE (TableName,FieldName) e.g. TABLE(GAUGINGS,STN)	Returns the FieldName field from a range of records in a Hydstra table.	#gaugings/stn
GROUP (GroupKey) e.g. GROUP(CATCH)	Returns all Groups for a Group Key	@catch.*
GROUP (GroupKey,GroupName) e.g. GROUP(CATCH,410)	Returns all Sites for a Group	@catch.410
FILE (Filename) e.g. FILE(C:\TEMP\SITELIST.TXT)	Returns all lines in a text file	^c:\temp\sitelist.txt
REGION () e.g. REGION(NORTH)	Returns all sites belonging to a particular region, as defined in each SITE record.	n/a
STNTYPE () e.g. STNTYPE(RAIN)	Returns all sites belonging to a particular station type, as defined in each SITE record.	n/a
JOIN (List1,List2) e.g. JOIN(GROUP(CATCH,1),GROUP(CATCH,2))	Joins two lists into a single list	@nswcatch.1,@catch.2
FILTER () e.g. FILTER(TABLE(SITE),GROUP(CATCH))	Filters one list by another list	#site;@catch.*
BETWEEN () e.g. FILTER(TABLE(SITE), BETWEEN(HYDSYS01-HYDSYS99))	Specifies a range of Sites to filter on	#site;HYDSYS01-HYDSYS04
MATCH () e.g. FILTER(TABLE(SITE),MATCH(HYD*))	Matches a 'wildcard' expression	#site;hyd*
NOT () e.g. FILTER(TABLE(SITE), NOT(DIR(CONFIG(HYDPATH)*.A)))	Negates a filter condition, so that it only passes when the condition is not true	#site;~\$&hyddpath.*.a

Named HYMANAGE Filters in Hydstra/TS

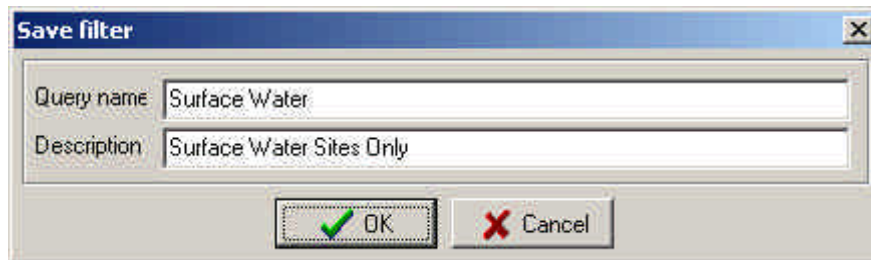
By Damian Skinner, Client Services Consultant

There is a new feature in the HYMANAGE application in Hydstra/TS that enables you to save a filter expression with a useful name so that you can reload it at a later date, in the same way that you can save and load parameters in Hydstra analysis programs.

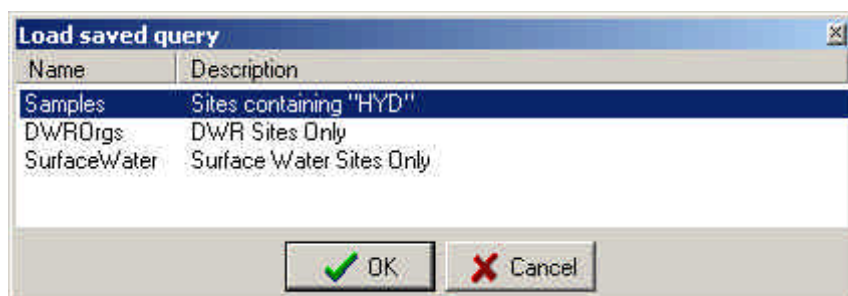
To develop a filter expression you need to bring up the "Filter Expression Builder" through the "Filter | User Filter" menu option in HYMANAGE:



When you click on the "Save" icon you will be prompted for the name to apply to the current filter expression:



Then, at a later date, when you want to load that particular filter expression, you can click on the "Load" icon and pick the "Surface Water" expression from the list.

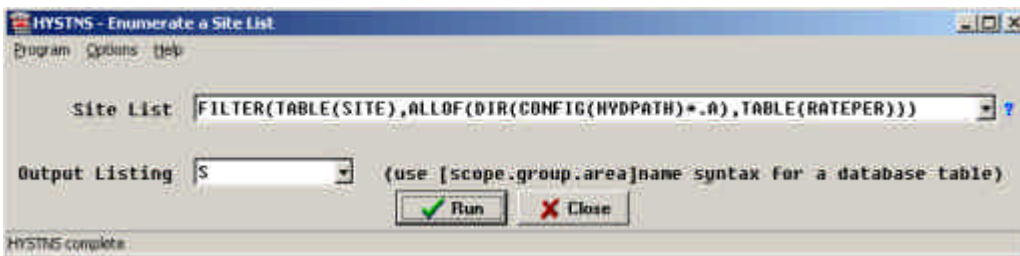


Named Site Lists in Hydstra/TS

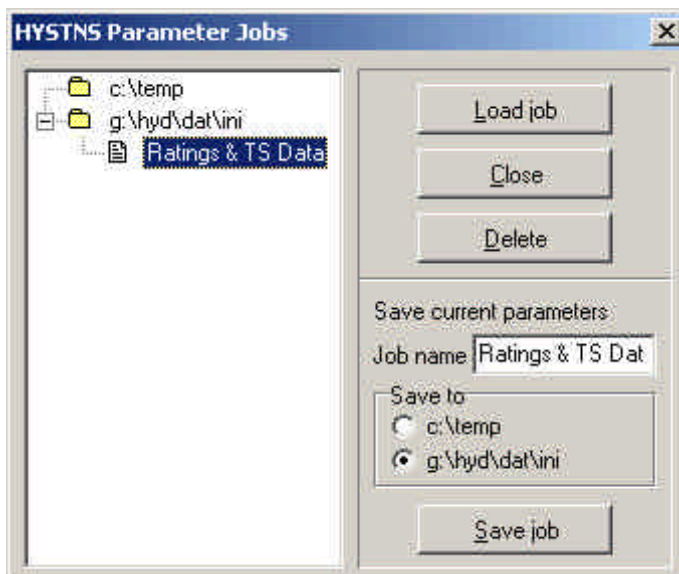
By Damian Skinner, Client Services Consultant

There is a new feature in Hydstra/TS that enables you to save a Site List with a useful name so that you can reload it at a later date. This is particularly useful when you are entering a Site List into a Hydstra/TS analysis program.

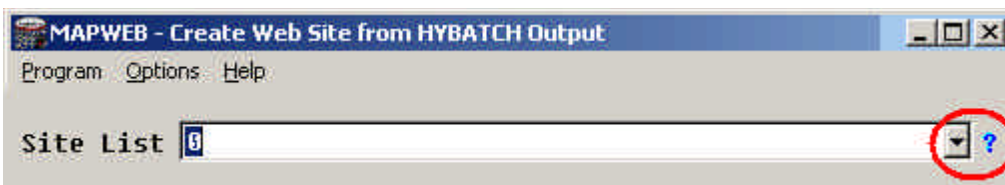
To develop a Site List you can use the HYSTNS program. For example you could use HYSTNS to build a Site List that includes all sites in the SITE table, filtered against those sites with time-series data (*.A in HYDPATH) and ratings (records in the RATEPER table):



You can save a Site List in HYSTNS the same way as you would save any Parameter Job, through the Program | Jobs menu.



Then at a later date, when you want to load a particular Site List, say "Ratings & TS Data", you can click on the Question Mark "?" icon.



And select it from the list



Hints for Favourites in Hydstra/TSM

By Wayne Soutter, Hydro Tasmania

Favourites in Hydstra/TSM provide a consistent user interface to the knowledge and processes that your work group considers to be important. Here are a few hints for getting the most out of your Favourites.

Save each Favourites Collection on a network drive

Each time you create a new favourites collection you will be prompted for the name of a text file to write the collection to. Since a Favourites collection may represent a significant amount of work, it is a good idea to save this file on a network drive where it is backed up, safe from equipment failure and upgrades. By putting favourites on a network drive, they are also available to everybody on the network.

Use Favourites to access Hydstra/TSM plots, reports and forms

Most Hydstra/TSM users are aware that they can access time-series reports and plots through a favourites collection, but did you know that you can also view any form from Hydstra/TSM?

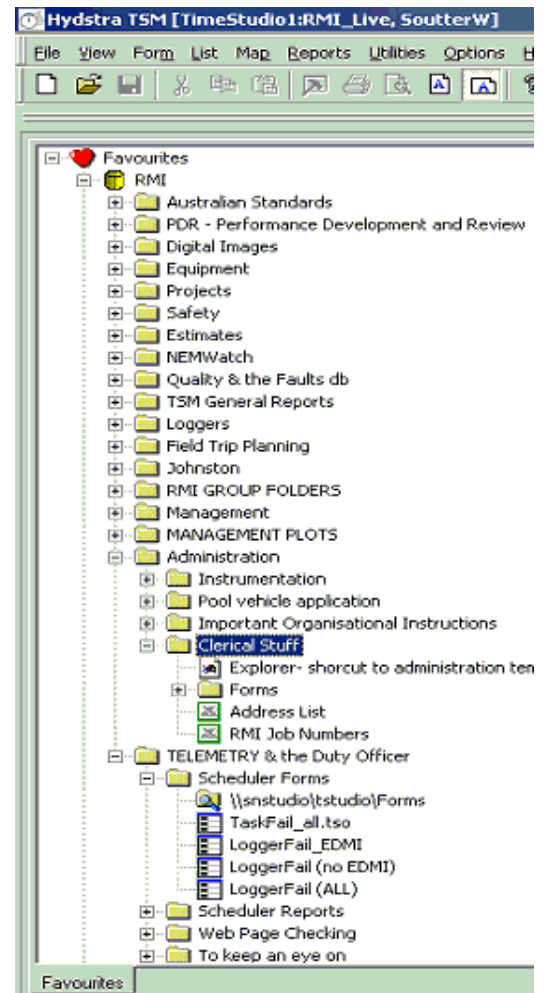
To add a form to a favourites collection you first need to create a query, by clicking on the "Retrieve" button. Then you can select the File| Save menu option to save the query to a TSO file. In the Save dialog box there is an "Add to Favourites" checkbox which allows you to add the query to an existing favourites collection.

Use Favourites to access data files outside Hydstra/TSM

You can use a favourites collection to link to non-Hydstra files, such as Microsoft Word, Excel or Access database files. To add a document to a favourites collection you can simply "drag and drop" a file from Windows Explorer. You can also right-click on a collection, and then select the "Insert New File" menu entry.

Use Favourites as a "virtual drive"

If you live in a world of many servers and obscure file paths you can use Favourites to bring order. Simply assemble the collections and folders as you want them, find the individual files and processes that you use the most, and "drag and drop" them in. For an example of how this is used in practice at Hydro Tasmania, see the adjacent picture.



Using Parameter Conversions in Hydstra/TSM

By Stuart Allie, Senior Technical Programmer

Hydstra/Modelling and Hydstra/TSM now have the ability to use parameter conversions, including rating conversions, from the TSBasic scripting language.

The basic steps for using a conversion in a script are:

1. Create a converter object for a site, location and parameter with CONVERTER_CREATE.
2. Add conversions (in order) to convert to another parameter with CONVERTER_ADD.
3. Call CONVERTER_RUN to convert the value, quality, and type using the conversions specified.
4. When you are finished with a converter object, call CONVERTER_FREE to release the memory used by that object. The program will clean up any converter object once the model or script has finished running, but it is good practice to free any objects once you are sure you have finished with them.

The most important thing to note about CONVERTER_RUN is that it **changes** the values passed into it according to the conversion. So if you need to hang on to the values as they were prior to conversion, you'll need to save the values in other variables.

CONVERTER_CREATE(nSite as Int, nLoc as Int, nParam as Int)

Creates a new Converter object and returns a handle to it. The site, location, and "from" parameter of the Converter are set to nSite, nLoc, and nParam, respectively. Failure to create a Converter results in a return value of zero.

CONVERTER_ADD(hConv as Int, nParamTo as Int)

Adds a conversion or rating to Converter "hConv" that converts to parameter "nParamTo". The function returns 1 on success, 0 on failure. It is possible to add multiple converters to form a chain, vis:

```
CONVERTER_ADD(hConv, 14000)
```

```
CONVERTER_ADD(hConv, 14100)
```

hConv will now convert to param 141.00 via the intermediate parameter 140.00.

CONVERTER_ADD will look for the most specific conversion first, and then progressively less specific conversions, in the same way that TSM does. In the example below, if there is a conversion from parameter 100.04 to 140.00 for site 150, location 1, for example, a rating, then that conversion will be used. If there is no site-specific conversion, CONVERTER_ADD will look for a global conversion from 100.04 to 140.00 and use that conversion if it exists.

CONVERTER_FREE(hConv as Int) : Integer

Deletes the Converter object "hConv", returning 1 on success, 0 on failure.

CONVERTER_RUN(hConv as Int, time ByRef As DateAndTime, nValue ByRef As Float, nQuality ByRef As Int, nType ByRef As Int, sComment ByRef As String, sErr ByRef As String) : Integer

Converts the value "nValue" using Converter "hConv" using Date/Time value "time", quality "nQual", type "nType", and comment "sComment" – all of which can be altered by the Converter. The function returns 1 on success, or 0 on failure, with details in sErr.



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Hydstra Pty Ltd provides an integrated suite of software and services for the management of environmental data, with a particular emphasis on renewable energy, water resources and urban water. Hydstra brings together two world leaders, HYDSYS and TimeStudio, to offer a complete solution to environmental data management. Hydstra software is aimed at organisations who need to manage large amounts of environmental data.

Hydstra provides leading edge solutions in:

- [Data Acquisition](#)
- [Data Management](#)
- [Data Analysis](#)
- [Modelling and Simulation](#)
- [Automated Task Scheduling](#)

Hydstra also provides ongoing support to make sure that you continue to get the most you can out of the software.

- [Migrate your existing data archive](#)
- [Streamline your data acquisition procedures](#)
- [Set up automated data auditing and web publishing systems](#)
- [Ongoing training](#)

Hydstra has a proven track record in providing first-class software and support, with over 150 installations in 22 countries around the world.

Hydstra Pty Ltd is a wholly owned subsidiary of Hydro Tasmania and brings with it the support of the Hydro Tasmania Consulting Division.

www.hydstra.com